

**Amendments to the Drawings:**

The attached sheet(s) of drawings reflect changes to Figure(s) 6-8 and replace the original sheet(s) of these Figure(s).

Appendix:      Three (3) Replacement Sheets.

**REMARKS**

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

**Specification**

By this paper the title is amended. These amendments are believed to resolve the objections of the April 9, 2007, Office Action at page 2. Applicant notes, however, that the title has been amended to enable the United States Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure and to aid indexing, classifying and searching. 37 C.F.R. § 1.72(b); MPEP § 606.01. This amendment is *not* intended to narrow, limit, alter or otherwise characterize what Applicants' regard as their invention. It is, of course, the claims and not the title that defines the invention being claimed.

**Drawings**

The Office Action has objected to Figures 6-8 as missing the designation "Prior Art." By this amendment, revised figures 6-8 are submitted with the designation of Prior Art. No new matter will be added to this application by entry of these amendments. Withdrawal of the objections to the drawings is respectfully requested.

**Status of the Claims**

Claims 1-4 are pending. By this paper, claim 1 is amended. No new matter is introduced by these amendments. Entry is respectfully requested.

**Claim Rejections**

**(a) Rejection Under 35 U.S.C. §103(a)**

Claims 1-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Harada in view of Yamada. [4/9/07 Office Action at p. 2-5].

Applicant respectfully disagrees and submits that review of Harada and Yamada clearly shows that a combination of Harada and Yamada does not teach, disclose or suggest the recited claims.

Applicant's claim 1 recites:

1. An image sensing apparatus comprising:
  - an image sensing element having a photoelectric conversion portion at which a plurality of photoelectric conversion elements are two dimensionally arrayed,
    - vertical transfer portions which vertically transfer signal charges stored in the photoelectric conversion portion in accordance with a vertical transfer pulse,
    - a horizontal transfer portion which horizontally transfers signal charges transferred from the vertical transfer portions in accordance with a horizontal transfer pulse, and
    - a charge detection portion which converts signal charges transferred from the horizontal transfer portion into a signal voltage or a signal current;
    - a switch which inputs a reference voltage from a reference power supply; and
    - a driving circuit which, while signal charges are stored in the photoelectric conversion portion, stops the horizontal transfer portion, drains unnecessary charges generated at the vertical transfer portions of said image sensing element, inputs to one terminal of a capacitor a reset voltage that resets the charge detection portion, and inputs

the reference voltage from the reference power supply to the other terminal of the capacitor by controlling said switch,

wherein the charge detection portion and said switch are arranged at the two terminals of the capacitor, and

wherein the reset of the charge detection portion by the driving circuit is continued during the draining of the unnecessary charges.

With regard to claim 1, the Office Action contends that Harada (Fig. 4) teaches an image sensing apparatus recited in Applicant's claim 1 with the exception of "draining unnecessary charges from the vertical transfer portion." [4/9/07 Office Action at p. 3]. However, the Office Action contends that Yamada teaches draining unnecessary charges from the vertical transfer portion (relying on Yamada [0272]). The Office Action also relies on Yamada ¶¶ [0282]-[0283] and Fig. 16 to contend Yamada teaches that "potentials of vertical transfer portions are set to the same potential . . . ." [4/9/07 Office Action at p. 4-5].

However, Applicant's claim 1, as amended, recites ". . . a driving circuit . . . wherein the reset of the charge detection portion by the driving circuit is continued during the draining of the unnecessary charges." That is, the present application is characterized such that, *inter alia*, while a driving operation for draining unnecessary charges to a drain is performed, a reset operation of FD amplifier is continued for the purpose of stabilizing OB clamp operation.

On the contrary, Harada relates to a technique for spreading a dynamic range by using two pixels of CCD which have different sizes. Therefore, although Harada discloses an FD amplifier it does not teach, disclose or suggest "a driving circuit . . . wherein the reset of the charge detection portion by the driving circuit is continued during the draining of the unnecessary charges", as recited in Applicant's amended claim 1.

Yamada discloses CCD which has a drain structure under a horizontal CCD, and in which charges are drained in a horizontal blanking period and lines arrayed in a vertical direction are read with thinning the lines. However, Yamada also does not teach, disclose or suggest “a driving circuit . . . wherein the reset of the charge detection portion by the driving circuit is continued during the draining of the unnecessary charges”, as recited in Applicant’s amended claim 1.

Therefore, for at least the reasons discussed, Applicant respectfully submits that even assuming *arguendo* that the combination of the Harada and Yamada is properly motivated, such a combination will not teach, disclose or suggest the apparatus recited in Applicant’s claims 1. Accordingly, Applicant respectfully submits that claim 1 and claims 2-4 depending therefrom, are neither anticipated by not rendered obvious by Harada taken alone or in combination with Yamada.

Accordingly, Applicant respectfully requests that rejections under 35 U.S.C. § 103(a) as to claims 1-4 be withdrawn being overcome or otherwise rendered moot.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art.

(c) **Dependent Claims**

Applicant has not specifically addressed the rejections of the dependent claims. Applicant respectfully submits that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in

condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

Applicant respectfully requests that the foregoing objections be withdrawn as being overcome or otherwise rendered moot.

**CONCLUSION**

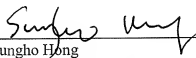
For at least the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1232-5209.

Respectfully submitted,  
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Dated: July 3, 2007

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